

This fall, Congress is likely to conference two major pieces of House and Senate energy legislation. The resulting energy bill will be possibly one of only a few pieces of legislation that may have a chance of getting to the President's desk and signed into law this year, and if passed, will impact electricity providers.

Congress is about to conference two of the most sweeping pieces of energy legislation in almost 10 years, which is likely to begin when Congress returns from summer recess in September. In the meantime, staff will be working during August to try to reach common ground on provisions in the two bills, which will not be easy, as the bills are quite disparate.

For background, both the House and Senate chambers have passed their own versions of energy legislation – each bill, nearly 800 pages. The House bill, originally titled H.R. 8, the North American Energy Security and Infrastructure Act, was predominantly a party-line bill of 249–174 with the support of only nine Democrats. Conversely, the Senate had reached significant bipartisan agreement and passed S. 2012, the Energy Policy Modernization Act, out of its chamber with an 85-12 vote.

In early July, after several weeks of negotiations between Senate Energy and Natural Resources Committee Chairman Lisa Murkowski (R-AK) and Ranking Member Maria Cantwell (D-WA), the Senate voted in favor of going to conference with the House in an effort to reconcile the two chambers' bills. The House had previously voted to go to conference and selected its 24 Republican and 16 Democrat conferees in May; the Senate chose its four Republicans and three Democrat conferees during its vote for conference. The respective conference committees include the members listed below.

House Conferees

Republicans

Fred Upton (MI); Joe L. Barton (TX); Edward Whitfield (KY); John Shimkus (IL); Bob Latta (OH); Cathy McMorris Rodgers (WA); Pete Olson (TX); David B. McKinley (WV); Mike Pompeo (KS); Morgan Griffith (VA); Bill Johnson (OH); Bill Flores (TX); Markwayne Mullin (OK); Rob Bishop (UT); Don Young (AK); Cynthia M. Lummis (WY); Jeff Denham (CA); Bruce Westerman (AR); Lamar Smith (TX); Randy Weber (TX); K. Michael Conaway (TX); Glenn Thompson (PA); Cresent Hardy (NV); and Lee Zeldin (NY)

Democrats

Frank Pallone Jr. (NJ); Raúl Grijalva (AZ); Collin C. Peterson (MN); Eddie Bernice Johnson (TX); Peter A. DeFazio (OR); Bobby L. Rush (IL); Lois Capps (CA); Doris Matsui (CA); Kathy Castor (FL); Dave Loebsack (IA); John Sarbanes (MD); Peter Welch (VT); Ben Ray Lujan (NM); Paul Tonko (NY); Jared Huffman (CA); and Debbie Dingell (MI)

Senate Conferees

Republicans

Lisa Murkowski (AK); John Barrasso (WY); Jim Risch (ID); and John Cornyn (TX)

Democrats

Maria Cantwell (WA); Ron Wyden (OR); and Bernie Sanders (VT)

Just prior to leaving for summer recess, Congressional leaders reportedly reached an agreement to remove three bills from the upcoming the conference that had been included in the House energy package and had drawn a veto threat from President Obama:

- The Western Water and American Food Security Act (H.R. 2898), a controversial California drought relief bill
- The Resilient Federal Forests Act (H.R. 2647), that promises to “speed up environmental reviews of logging and underbrush removal projects on tribal and federal lands in an effort to reportedly pre-emptively combat wildfires”
- The American Competes Act (H.R. 1806), which would limit federal research authorizations

The Senate Energy and Natural Resources Committee released a 50-page section-by-section of its bill and the House Natural Resources Committee released a summary of amendments that provides links to detailed one-pagers on each of the major amendments to its bill. Given the breadth of the energy legislation and the unique focus that it will receive in the coming months, it is important to understand the provisions of the House and Senate bills that impact utilities, electricity providers and related entities.

I. Proposed Policy Provisions of Interest to Utilities, Electricity Providers and Related Entities

Infrastructure

- **Infrastructure:** An amendment to the Public Utility Regulatory Policies Act (PURPA) to encourage all electric utilities to update infrastructure and update and advance grid capacity and resiliency to allow for advanced metering, high-tech sensors, grid monitoring, and remote configuration and redundancy systems.
- **Critical Electric Infrastructure Security:** Would give the Secretary of Energy the authority to require electric infrastructure owners and utility companies to take necessary steps to address grid security emergencies and ensure critical electric infrastructure is protected.

- **Energy Efficient Transformer Rebate Program:** Would require the Department of Energy to provide rebates for the replacement of energy inefficient transformers. Would authorize funding for replacements up to \$5 million for each year.
- **Rural Demonstration Projects:** With respect to renewable energy projects and other objectives in the energy sector; priority would be given to projects that assist in delivering electricity to rural and remote locations.

Grid Reliability

- **Electric Reliability:** A requirement for each electric utility to adopt a 10-year plan to ensure reliability of electricity generation.
- **Strategic Transformer Reserve:** A program to reduce the vulnerability of grids by developing a plan for utilities and other electricity providers to retain (either individually or jointly) spare large power transformers and emergency mobile substations in order to restore operations of the bulk-power system in the event that a transformer is destroyed or disabled.
- **Independent Reliability Analysis:** A requirement that FERC and the Electric Reliability Organization analyze any proposed or final rules by any federal agency that would impact utilities and/or electricity generating entities, to evaluate the rules' impact on electric reliability and resource adequacy, the electricity generation portfolio of the US, the operation of wholesale electricity markets, and energy delivery and infrastructure.
- **Reliability Impact Statement:** Requires Transmission Organizations to submit a report to FERC with an analysis of proposed or final rules considering the effects of those rules on electric capacity, and electric reliability of the electricity generation portfolio of the US; on the operation of wholesale electricity markets; and on energy delivery and infrastructure, including electric transmission facilities and natural gas pipelines.
- **National Energy Security Corridors on Federal Lands:** Both bills would provide provisions to expedite timelines for agency approvals of right-of-way agreements that contribute to the enhancement of the reliability and safety of the electric grid. While the Senate bill would allow for expedited permitting for infrastructure and electricity lines on federal and non-federal lands, the House bill contains a similar provision, but only for natural gas transmission facilities and pipelines. In addition, the House bill would direct the Secretary of Energy to designate 10 National Security Corridors within two years. Also, while the Senate bill addresses development of solar, wind and geothermal on public lands, the House bill includes only a provision to expedite rights-of-way agreements for natural gas pipelines on federal lands.
- **Statement of Policy on Grid Modernization:** A statement of commitment by the US to promote and advance grid modernization to enable multidirectional power flow that leverages energy resources and optimizes overall grid reliability. The statement supports research and development concerning energy storage, predictive tools, smart inverters, cybersecurity and other advanced technologies for protection of the grid.

Cybersecurity

- **Cyber Sense Training Program:** A program to identify new technologies, develop solutions and provide technical support to utilities and electric sector stakeholders. The provision would also direct the promulgation of regulations regarding vulnerability reporting for technologies tested under this program. The provision would also enable the Department of Energy to consider incentives to encourage the use of tested cyber technologies in this program in bulk-power systems.
- **Smart Meter Privacy Rights:** Would prohibit a local publicly owned electric utility from sharing or selling a customer's electrical consumption data unless an exception applies or the customer gives consent.

Net Metering

- **Net Metering Studies:** The Senate bill would direct the Department of Energy to undertake a study of the costs and benefits of net metering. Conversely, the House bill contains its own direction to the Secretary of Energy for a report specifically concerning the "weaknesses" in currently available smart meters.

Energy Storage

- **Battery Storage:** The House bill calls for a report that would study the pros and cons of federal regulation with regard to battery storage development and deployment. The study would examine challenges to the widespread use of battery storage technology; the potential impact from large-scale battery and behind-the-meter storage could have on renewable energy utilization; potential grid-scale use nationwide; and would study policies that have been shown to promote storage technology deployment by state and local governments and private end-users. While the Senate bill is generally supportive of research and development concerning battery storage, particularly associated with vehicle technology, it is silent on calling for a report.

Renewable Energy

- **Shared Solar Act of 2016:** An amendment to PURPA that would require each electric utility to allow for interconnection service and net billing service for a community solar facility.
- **Research and Development:** A statement of commitment in the Senate bill to the following objectives is included:
 - Increase conversion efficiency of all forms of renewable energy through improved technologies
 - Decrease the cost of renewable energy and delivery and promote diversity of the energy supply
 - Decrease dependence of the US on foreign mineral resources and increase the export of renewable generation technologies from the US
 - Decrease the environmental impact of renewable energy-related activities

- **Solar Energy:** Innovations include:
 - Photovoltaics
 - Solar heating
 - Concentrating solar power
 - Lighting systems that integrate sunlight and electrical lighting in complement to each other
 - Development of technologies that can be easily integrated into new and existing buildings
- **Wind Energy:** Innovations include:
 - Low-speed wind energy
 - Testing and verification technologies
 - Distributed wind energy generation
 - Transformational technologies for harnessing wind energy
- **Geothermal Energy:** Innovations include:
 - Improving detection of geothermal resources
 - Decreasing drilling costs
 - Decreasing maintenance costs through improved materials
 - Increasing the potential for other revenue sources, such as mineral production
 - Increasing the understanding of reservoir life cycle and management
- **Hydropower:** Innovations include:
 - Advanced technologies to enhance environmental performance and yield greater energy efficiencies
 - Ocean energy, including wave energy

Energy Workforce

- **Energy and Manufacturing Workforce Development:** Would require the Secretary of Energy, when considering awards for existing grant programs, to prioritize education and training for energy and manufacturing-related jobs in order to increase the number of skilled workers trained to work in energy and manufacturing-related fields. Would also establish a “21st Century Energy Workforce Advisory Board” to develop a strategy for the support and development of a skilled energy workforce including internship, mentorships retraining displaced workers and apprentice programs of states and units of local government.
- **Minorities in Energy Initiative:** Would require the prioritization of education and training of underrepresented groups in energy and manufacturing-related jobs by directing the Secretary of Energy to:
 - Establish a clearing house to maintain and update information and resources on training and workforce development programs for energy and manufacturing-related jobs, including job training and workforce development programs available to assist displaced and unemployed energy and manufacturing workers transitioning to new employment

- Provide technical assistance for states, local educational agencies, schools, community colleges, universities (including minority serving institutions), workforce development programs, labor-management organizations and industry organizations that would like to develop and implement energy and manufacturing-related training programs
- Direct the Department of Energy to “give special consideration to minority serving institutions and Historically Black Colleges and Universities and dislocated energy and manufacturing workers”; however, no additional funds are authorized to carry out these requirements – the House bill maintains that “such requirements shall be carried out using amounts otherwise authorized”

II. Proposed Funding Authorizations of Interest to Utilities, Electricity Providers and Related Entities

• Electricity and Energy Storage Programs

- \$200 million (for each of FY 2017-2026) for electricity and energy storage programs, including:
 - State and Regional Electricity Distribution Planning
 - For partnerships between the federal government and state or regional organizations to facilitate local distribution plans by conducting a resources assessment and analysis of future demand and distribution requirements and developing open sources tools for state and regional planning and operations
 - Electric System Grid Architecture, Scenario Development, and Modeling
 - To establish a collaborative process to develop model grid architecture and a set of future scenarios for the electric system to examine the impacts of different combinations of resources on the electric grid (for national laboratories, states, industry representatives, academic institutions, independent research institutes)
 - Hybrid Micro-Grid Systems for Isolated and Resilient Communities
 - To promote development of hybrid micro-grid systems for isolated communities and micro-grid systems to increase the resilience of critical infrastructure

• Cybersecurity for the Energy Sector Research, Development and Demonstration Program

- \$65 million (for each of FY 2017-2025) for partnerships among federal agencies, the energy sector and other stakeholders to develop advanced cybersecurity applications and technologies for the energy sector and to leverage electric grid architecture.

• Energy Sector Component Testing for Cyberresilience Program

- \$15 million (for each of FY 2017-2025) for establishing a cybertesting and mitigation program to identify vulnerabilities of energy sector supply chain products to known threats.

- **Grid Storage Program**

- \$50 million (for each of FY 2017-2026) for DOE to provide technical and financial assistance to states, tribes, or units of local government to participate in or use research, development or deployment of the technology and demonstration of electric grid energy storage that addresses areas identified in the 2013 DOE Strategic Plan for Grid Energy Storage, including:

- Materials, electric thermal or electrochemical research
- Power conversion technologies research
- Empirical industry standards compared to storage capacity, cycle length and reliability of different types of electricity storage
- Grid-scale testing and analysis of storage devices
- Mitigation and guidelines for electricity storage device safety and reliability
- Standards for storage device performance and grid interconnection

- **Energy Workforce Pilot Grant Program**

- \$20 million (for each of FY 2017-2020) to competitive grants for job training programs that lead to an industry-recognized credential. Eligible for:

- Public or non-profit organizations
- Labor organizations
- Post-secondary education organizations
- Workforce development boards
- Public or private energy employers

- **E-Prize Competition Pilot Program**

- \$10 million to broadly implement sustainable community and regional energy solutions that seek to reduce energy costs through increased efficiency, conservation and technology innovation in high-cost regions.

- A “high-cost region” is a region in which the average annual unsubsidized costs of electrical power retail rates or household space heating costs per square foot exceed 150% of the national average

- **State Energy Program (reauthorization)**

- \$90,000,000 (for each of FY 2016-2020) to provide funding and technical assistance to state energy offices to help states advance their clean energy economy and national energy goals. The legislation would reduce the amount of funding for this program from \$125 million per year to \$90 million for each fiscal year through FY 2020 for competitively awarded financial assistance.

- Building Training and Assessment Centers

- \$10 million for institutions of higher education to establish building training and assessment centers:

- To train engineers, architects, building scientists, building energy permitting and enforcement officials in energy-efficient design and operation
- To assist institutions of higher education in training building technicians

- **Career Skills Training**

- \$10 million in grants (each requiring a 50% match) to entities to train students via classroom and on the job instruction to obtain industry-related certifications to install energy efficient buildings technologies.

- **Carbon Dioxide Capture Technology Prize**

- \$50 million for projects concerning carbon dioxide capture from media in which the concentration of carbon dioxide is dilute, including:

- Designs for a promising capture technology
- Successful bench-scale demonstration of a capture technology
- Operational capture technology on a commercial scale that meets minimum levels that will later be determined by the Secretary of Energy

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